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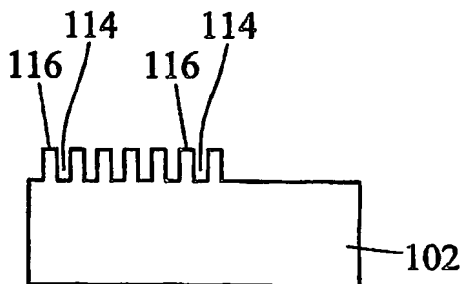
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(54) Title: METHOD AND SYSTEMS FOR SINGLE- OR MULTI-PERIOD EDGE DEFINITION LITHOGRAPHY



(57) Abstract: Methods and systems for multiperiod, edge definition lithography are disclosed. According to one method, a first material is isotropically deposited on a substrate and on a field mesa also located on the substrate. The first masking material is then anisotropically removed from the substrate to leave a nanometer-pitched sidewall adjacent to the field mesa. A second masking material is then isotropically deposited on the substrate, the sidewall, and the field mesa. The second masking material is then anisotropically removed from the substrate to leave a second nanometer-pitched sidewall adjacent to the first sidewall. The process may be repeated to create alternating nanometer-pitched sidewalls of the first and second masking materials. One of the first and second masking materials may then be etched from the substrate to leave

nanometer-pitched channels in one of the masking materials. The channels may be used to etch nanometer-pitched features in the substrate.

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